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ABSTRACT

With Chile's return to democracy in 1990, evidence of serious deficiencies in quality and equity in Chilean schools prompted the Ministry of Education to design and implement the 900 Schools Programme, a reform measure to improve the quality of primary education in the country's impoverished areas. The guiding principles of the program are positive discrimination (affirmative action), equity, professionalization of teachers, and the interaction of school culture with community culture. The program consists of: (1) learning workshops for third- and fourth-graders conducted by trained older students; (2) inservice workshops for teachers; (3) preparation of workbooks and manuals for students and teacher; (4) the creation of classroom libraries; and (5) the improvement of school buildings and grounds. The program has led to increased teacher professionalization, improvement in student morale, improvement in language arts and mathematics achievement, and improvements in school facilities, which in turn has contributed to a better educational environment and sense of pride in education in impoverished areas. (Two appendixes outline actions undertaken for language skills training and list educational materials developed for the program.) (MDM)

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The 900 Schools Programme: improving the quality of primary schools in impoverished areas of Chile

Johanna Filp

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The 900 Schools Programme: improving the quality of primary schools in impoverished areas of Chile

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Increasing and improving the quality of basic education

Presentation of the series of monographs

The renewed interest being given to basic education calls for the design and implementation of new strategies to stop the present deterioration in the expansion and quality of primary and adult education in various developing countries, especially among the most underprivileged.

In response to this concern, the IIEP has undertaken an extensive programme of research, training and dissemination with a view to reinforcing the decision-making and planning capacities of the different countries. This series of monographs, *Increasing and improving the quality of basic education*, is part of this programme.

The aim of the series is to disseminate, as quickly as possible, relevant documentation on basic education to all planners and decision-makers.

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Chapter I
Introduction

Chile would appear to be a country without major educational problems, given a long tradition of increased access to schools and efforts to improve the quality of education. In reality, however, there is evidence of serious deficiencies in quality and a high degree of inequity, with grave consequences for the most impoverished sectors of the country as well as for national development.

With the return to democracy in 1990, this situation prompted the Ministry of Education to design and implement a programme for improving the quality of primary schools in impoverished areas of Chile, aimed at improving learning conditions in the poorest schools in the country and raising the achievement levels in language arts and mathematics of students in Grades 1 to 4.

Initiation and elaboration of this programme was made possible by international co-operation from the Governments of Sweden and Denmark.

The guiding principles of this programme are positive discrimination, equity, professionalization of teachers, and interaction of school culture with community culture.

The work has been organized along five lines of action:

(i) Learning workshops for third and fourth graders with learning problems, led by monitors from the community. These are young people chosen by the school and trained by supervisors and a team of specialists. The workshops consist of two-hour sessions held twice a week in addition to the regular school hours. They are based on a participatory educational approach with emphasis on appreciation of community culture and development of the children's self-esteem.

(ii) In-service workshops for teachers, led by supervisors from the Ministry of Education who have participated in National Training Workshops. They work with first to fourth grade teachers in the schools for which they are responsible under the programme. These workshops focus on teaching and learning language arts and mathematics.

(iii) Preparation of work books for children in Grades 3 and 4 and manuals for teachers, supervisors and monitors. The textbooks used by the children are the usual ones, since the programme builds on existing resources and seeks to maximize their utility.

(iv) Classroom library and didactic materials. Classroom libraries were distributed in each first grade and second grade classrooms, and didactic materials prepared by the central team of specialists are distributed in Grades 1 to 4.

(v) Improvement of school facilities, involving construction and repairs essential in providing an adequate and protected educational environment.

These five lines of action reflect the multiple causes attributed to student failure and focus on improving the quality of education in the schools while encouraging teachers to perceive and assume their responsibilities in this process.

Formulation of the programme was oriented by the outcomes of educational research as well as by developments in non-formal and community education.

Work began in 1990 with 969 schools, extending to 1,376 in 1992. The programme reaches 222,491 children from first to fourth Grades and 7,267 teachers.

The cost of the programme (not including building improvements) is currently US$2,300 per school annually, or US$12 per student annually (from Grades 1 to 4).

Ten per cent of primary schools were selected on the basis of scores obtained in the national achievement test, selecting the poorest schools with the lowest scores.

The programme has utilized existing administrative structures, especially the supervisory structure, with an aim to empower human resources through permanent training strategies. A popular education component is also included, in which community members collaborate in the education of third and fourth grade students with learning problems.

Training operates through a communication chain that begins with the central team in the Ministry of Education, which trains the supervisors in the national workshops. The supervisors, in turn, train teachers and monitors in weekly or bi-weekly sessions in the schools.

The programme has not undergone any radical changes; rather the materials and the proposal have been continually refined, along with variations in emphasis on different links in the communication chain. The first year concentrated on installation of the programme, the second year focused on working with school principals and forming teams in each school, and the third year is working on reinforcement of changes in the classroom.

One of the principal achievements of the programme has been the professionalization of the supervisors, whose effectiveness has been enhanced as they have become more identified with the proposal of the programme.

Another important achievement has been the acceptance and appreciation of the learning workshops and the work of the community monitors, after initial resistance to this component.

Improvement in the language arts and mathematics achievement levels of first, second and fourth grade students has been another important result of the programme.

Improvements in school facilities contributed to a better quality of the educational environment and generated a new sense of entitlement in poor communities, regarding quality of educational services.

In the classroom, increased time on task has been one of the important changes observed, as well as more positive attitudes toward the students. The more specific changes in teachers' behaviour have been slow to materialize, at least after one year of programme functioning.

Factors contributing to the success of the programme include the following:

- the Ministry of Education kept its promises to schools and supervisors;
- international co-operation for the development and installation of the programme;
- the combining of work styles prevalent in non-governmental organizations and the Ministry;
- the existence of a solid base of information on the reality of the educational system;
- the central team's leadership style, characterized by sensitivity to the communities' needs and professional legitimacy in the eyes of supervisors, teachers and principals;
- a popular education model applicable to the schools;
- permanent monitoring;
- production and distribution of didactic materials appropriate to the characteristics of the communities.

Chapter II
Description and context

A. The 900 Schools Programme

During 1990, when democracy was reinstated in Chile, the Ministry of Education inaugurated a special programme to improve learning conditions in the poorest 10 per cent of the country's schools and to raise the achievement levels of their students in the first four years of primary education, in language arts and mathematics.

The programme follows four main guiding principles: positive discrimination, equity, professionalization of teachers, and interaction of the school culture with the community culture.

The work follows five lines of action:[1]

(1) *Learning workshops.* These are group sessions for third and fourth grade children who have exhibited learning difficulties and very low achievement. The educators are young people from the same community who have been previously trained as monitors. They are provided with specially prepared teaching manuals, and each student has a workbook. A participatory educational approach is used in the training as well as the work shops, which are conducted after normal school hours. This is one of the ways in which positive discrimination is applied, in that the lowest achievers spend more learning time in the school. The manuals and work books incorporate the daily experience of the children at home and in the community as an essential ingredient for educational interaction.

(2) *In-service workshops for teachers.* These are conducted by supervisors from the Ministry of Education, who have participated in national training workshops prior to working with first to fourth grade teachers in the schools supervised by the Programme. The national workshops and the in-service training are experiential and active in nature, and strongly emphasize open learning activities that promote students' verbal expression, exploration, decision-making, and incorporation of daily experiences at home and in the community in the educational process[2].

1. Ministry of Education. *Programa de Mejoramiento de la calidad en escuelas básicas de sectores pobres, Programa de las 900 escuelas.* Santiago, Chile, Ministry of Education, 1990.

2. Gálvez, G., Navarro, S., Riveros, M. ; Zanocco, P. *Orientación del trabajo en los Talleres de Profesores en Matemática.* Santiago, Ministerio de Educación, September 1992.

(3) *Preparation of work-books for students and in-service training manuals for teachers and supervisors.* Two teams of specialists, one in language arts and one in mathematics, produced these texts as instruments of cultural interaction. They undergo permanent revision by supervisors and teachers, with the aim of correcting and improving them.

(1) *Classroom libraries and didactic materials.* The teams of specialists designed didactic games which were distributed in all the classrooms. Classroom libraries were also provided for Grades 1 and 2, containing a set of books especially selected for these groups by specialists in children's literature. These libraries are intended to foster the children's interest in the world of written language, since their literacy experience has been rather limited. A user's manual for teachers was also prepared.

(5) *Building improvements.* After a detailed study of the physical plant conditions, the necessary construction, repairs, and installations were made.

The programme operates through a communication chain that links the central team in the Ministry of Education with provincial and regional directors, supervisors, teachers, monitors and students.

Work began in 1990 with 969 schools, extending to 1,376 in 1992. The programme reaches 222,491 primary school students in Grades 1 to 4 and 7,267 teachers. Schools were selected on the basis of scores obtained in the national achievement tests (SIMCE) and the level of poverty of the children attending the schools, selecting the schools with the lowest achievement in the most impoverished areas of the country, urban as well as rural[3]. The cost of the programme has reached approximately US$5 million per year, donated by the Governments of Sweden and Denmark[4].

B. The national context

Coverage

Chile is a country in which the problem of access to primary education was practically solved 20 years ago. The current net rate of school enrolment in the population 6 to 15 years old is 95.7 per cent[5]. This is complemented by a clear tendency toward the urbanization of the population, reflected in the fact that 81 per cent of all students attend urban schools, and the rest are in rural areas. This tendency is directly proportional to the relationship between the total urban and rural population in Chile.

3. Ministry of Education. *Programa de mejoramiento de la calidad en escuelas básicas de sectores pobres.* Santiago: Ministry of Education, 1991.

4. Cardemil, C. ; Latorre, M. *El Programa de las 900 escuelas. Eje de la Gestión y evaluación de su impacto.* Santiago: UNESCO/OREALC, 1992.

5. UNESCO/OREALC. *Situación educativa de América Latina y El Caribew, 19890-1987.* Santiago, Chile, UNESCO/OREALC, Principal Education Project, 1990.

Quality and equity

Nevertheless, this favourable situation in terms of educational coverage has not produced equally favourable results in the quality of education. There are serious deficiencies in achievement levels and equity on a national scale. Results of national measurements of eighth grade achievement levels in Spanish in schools located in high socio-economic areas show 61 per cent of the programme objectives obtained. In schools located in impoverished areas, this percentage was only 42 per cent[6]. There are also deficiencies in the quality of classroom teaching, quality of schools and community relations[7].

Automatic promotion exists up to fourth grade, but until this measure was introduced, the highest rates of repetition were observed in grade 1 in impoverished areas. The problem continues to exist, expressed by low achievement levels and special difficulties in learning to read and write, which affect students' possibilities for future success in school[8].

Economic development and poverty

In general, there are serious deficiencies in the quality and equity of education in Chile, affecting primarily the most impoverished sectors. This problem is considerable, despite the fact that Chile is recognized for its economic progress. Although per capita income puts Chile above the poverty line, internal distribution of wealth continues to be less than equitable. Approximately two million people (16.8 per cent of the population) are unable to meet their minimum nutritional requirements, and approximately 44 per cent of the population cannot satisfy its basic needs[9].

Decentralization and privatization

During the military regime, the educational system was modified in two major ways: decentralization and privatization. Decentralization involved shifting administrative responsibility for schools to the municipalities. As a result, teachers were no longer employed by the Ministry, and as private employees, they lost traditionally valued job stability. The system allowed the creation of private schools that receive a subsidy for each student registered. Two measures were introduced to ensure quality of education: a national supervisory system and a national system for measuring the quality of education (SIMCE)[10].

6. Ministry of Education. SIMCE Results for 1988. Santiago, SIMCE, 1991.

7. Replad. *Medición de la calidad de la educación: Por qué, cómo y para qué?* Santiago, UNESCO/OREALC, 1992.

8. Filp, J. "El primer año de escuela: ¿Puerta a un mundo nuevo?" In: J.E. García-Huidobro (Ed.) *Escuela básica y calidad de la educación.* Santiago, CIDE, 1989.
Filp, J. and Cabello, A.M. *Mejorando las oportunidades educativas de los niños pobres. Seminario Regional sobre la Transición del Niño desde la Familia a la Escuela.* Santiago, UNICEF, 1992.

9. Sepúlveda, Erika; Gallardo, Iris; Canales, Pedro; Illanes, Marta. *Análisis de situación. Menores en Circunstancias Especialmente Difíciles.* Santiago: UNICEF, 1991.

10. Espínola, V. *Reformas educativas del régimen militar y calidad de la educación.* Santiago: CIDE, Document for Discussion No. 4, 1987.

The principles of curricular flexibility and community participation were also introduced. In practice, these measures resulted in even greater deficiencies in education for the poor (further examination of these aspects is beyond the scope of this paper); however, it is important to point out that it was precisely the space defined by these measures that served as the basis for implementing the programme[11].

Demand for education and participation in schools

Formal education is highly valued in general, especially by poor families, who see it as a means of social mobility and integration. Participation of parents in schools is limited and non-productive, even when it is formally encouraged. In general, teachers tend to disregard poor parents, and the parents under-estimate their own competency, thereby closing the circle of inequality[12]. Privatization has introduced a certain dynamic in this situation by slightly increasing the options available to parents and making schools pay more attention to community demands in order to attract more students.

Popular education

Economic measures introduced during the military regime with its atmosphere of repression heightened marginalization, poverty, unemployment and other social and economic problems. Non-governmental organizations (NGOs) dedicated to education and social development were created to aid communities in finding solutions to these problems.

As a result of these initiatives, a variety of creative projects for action in impoverished areas began to form what is referred to as 'Popular Education'.

> "The originality of these projects for action and social change deserves to be emphasized. The majority, in an effort to solve the problems mentioned above, intervene in the ways the target groups think and act, seeking to synthesize their own knowledge and that provided by the educator in order to produce more efficient and organized active responses. This is the educational meaning of these experiences: they attempt not only to solve a concrete problem, but also to create organizational spaces where the poor can express their opinions, develop their identity and increase their presence and power in society"[13].

11. Inequality in the educational system increased, owing to socio-economic differences in the municipalities; flexibilization resulted in the minimization of the curriculum in poor schools, and teachers lost job stability when they became private employees. A high unemployment rate among teachers also contributed to hiring at low salaries.

12. Cerri, M. *Calidad de la Educación: Escuela y Participación.* Santiago: CIDE, 1991.

13. García-Huidobro, J.E., Martinic, S. y Ortiz, I. *Educación popular en Chile.* Santiago: CIDE, 1989, p. 2.

Educational research

Educational research is another activity developed by the NGOs, in large part with the assistance of international co-operation[14]. This activity has produced a solid and vast body of knowledge on Chilean educational reality, with strong emphasis on education in impoverished areas. There was, therefore, a fairly complete database that served as input for the definition of the educational policies put forward by the democratic government of the 'Concertation', and which aided in the formulation of needs and priorities, as well as highlighting existing deficiencies in national education[15].

The transition to democracy

The year of transition from the authoritarian regime to democracy represented an opportunity for many dissident groups to participate in the formulation of educational policies for the democratic regime[16]. The experience accumulated in the field of popular education and the information provided by research constituted elements for diagnosis and planning. Some of this background information includes the following:

- Serious deficiencies exist in the quality and equity of primary and secondary education.
- Teacher training is inadequate to meet the educational needs of the poorest sectors; there is a lack of training for working in poor communities.
- Teachers tend to blame student failure on the family or on the children. They do not perceive the school's or the teacher's responsibility, and don't attempt to change or improve their own performance.
- Availability of school textbooks affects successful learning, but existing texts are inadequate for the cultural reality of poor children.
- Teachers have low expectations regarding the success of the poorest children, which negatively affects learning.

14. See also Cariola, P. *The history and lessons of educational research development in Latin America 1960-1990.* Santiago, CIDE, 1991.

15. For example, Cardemil, C.; Laorre, M.; Filp, J. ; Gálves, G. "Factores que inciden en el mejoramiento de los aprendizajes en la educación básica", in: Cuadernos de Educación (CIDE), October 1991. Document prepared for the National Workshop for Supervisors held in Peuuta de Tralca, September 1991.
Arancibia, V. "Didáctica de la Educación Primaria" en: C. Muñoz-Izquierdo (Ed.) Calidad, equidad y eficiencia de la educación primaria: Estado actual de las investigaciones realizadas en América Latina. REDUC-CIDE, Santiago, 1988.
Filip, J., Cardemil, C. ; Valdivieso, P. *Professores y profesoras efectivos en Chile.* CIDE, Santiago, 1984.
Espínola, V. *La calidad de la educación desde la perspectiva latinoamericana: análisis de información.* 1980-1987. Stho. CIDE/REDUC, 1988.
Filp, J. *El primer año de escuela en Chile.* Santiago: CIDE, 1988.
Parra, R. ; Tedesco, J.C. *Marginalidad Urbana y Educación Formal, planeo del problema y perspectiva de análisis.* Buenos Aires, UNESCO/CEPAL/PNUD, 1981.

16. This seemed like Utopia come true for many of us, since we had put all our efforts during the 16 year dictatorship into constructing a solid base of knowledge about our educational reality, that would serve as input for policy-making. This was our hope, and when it became a reality, it seemed like a dream.

- Non-formal educational experiences are available to assist learning in children left behind by the primary school system.

There was also a fairly complete statistical description in the Ministry of Education, the Ministry of Health and the National Planning Office on school facilities, the student population living in extreme poverty, and eighth grade achievement levels.

Organizational development

During the military regime, *community participation and community, political and labour organizations* were systematically destroyed and/or repressed. Educational work was necessarily slow, largely supported by NGO initiatives and popular education projects, frequently under the protection of the catholic church. As indicated above, groups organized to solve concrete food and housing problems, and to re-establish social ties. The book 'Popular education in Chile' states that:

> "These popular education efforts were initially created in reaction to government policies and were highly defensive, but they gradually became defined as a contribution to the construction and refounding of a democratic society." (p. 8)[17].

There are currently no formal obstacles to community organization and participation, but there is noticeable apathy and discontent among the poor, because their basic problems persist and have not been rapidly solved under democracy.

Participation in the schools is advocated but few real efforts are made to encourage collaboration. Parent involvement is generally linked to economic donations or the organization of special school events. A study by Cerri on the role of participation in education notes that

> "In both primary and secondary education, participation is an essential component of the educational process, but even when it is attributed importance, it is not an integral part of the educational proposal at both levels. Participation is recognized theoretically as important and desirable, but it is better understood as an auxiliary or complementary activity rather than an activity defined as essential to education at these levels." (p. 10)[18].

C. The primary education system

Primary education comprises eight years of compulsory education. Secondary liberal arts or technical-vocational education are four-year programmes. Higher education is available at universities and professional training institutes.

17. García-Huidobro, J.E. op. cit.

18. Cerri, M. op. cit.

The administrative system is decentralized at the regional, provincial and municipal levels. The Ministry of Education has centralized supervisory and policy-making functions.

In 1987, there were 2,963,139 pupils enrolled. Approximately 6 per cent of the schools are private and charge tuition, and are generally attended by students from high-income families. The remaining institutions are either private and state subsidized or municipal and state subsidized[19].

Table 1. Number of primary and secondary schools according to their administrative dependency.

	Total	Municipal	Private subsidized	Private paid	Corporation
Pre-primary	4 265	2 311	1 316	636	2
Special education	336	175	156	4	1
Primary	8 452	5 706	2 236	508	2
Secondary	1 847	694	737	324	92
Total	14 900	8 886	4 445	1 472	97

Overall administration is divided between the central and regional levels. The central level comprises the Ministry of Education, the Undersecretary of Education and the General Education Division, the Planning and Budget Division, the In-Service Training Centre and General Administration. At the regional level, there is one office in each of Chile's 13 regions, and 40 provincial offices throughout the country. These offices are most directly in contact with schools and are staffed by technical personnel and the supervisory teams.

This decentralization and flexible curriculum policies allow certain freedom for designing local initiatives. In addition, the 'Ley orgánica de educación' (Education Law) allows each school to formulate its own educational programme, which must be approved by the Ministry of Education where the fundamental objectives and minimal contents which provide the framework for these programmes are defined.

D. The typical school before innovation

1. The school

In 1987, the education budget represented 16.3 per cent of the national budget. The state subsidizes education by paying a monthly subsidy for each student enrolled. In principle, primary education is free and accessible to all school-age children. However, educational conditions vary according to the socio-economic level of each community. In poor

19. Anuario Estadístico 1990. División de Planificación y presupuesto, Mineduc.

neighbourhoods, this means there may be deficiencies not only in the economic conditions of families, but also in the quality of buildings, equipment and technical staff of local schools. This is illustrated by a description of the schools before initiation of the programme, made in the context of evaluating classroom procedures.[20]

> "The poverty of the schools in the sample is striking. In addition to being located in poor neighbourhoods, in the case of the urban schools, and in isolated rural areas, the school buildings are visibly deteriorated. Peeling walls, flimsy construction material and unfinished classrooms, permeated by the smell of bathrooms without running water. Playgrounds are generally dirt-covered, treeless, and too narrow to run or play freely in. In southern Chile, some of the playgrounds have roofs to protect the children in winter, which makes them dark and enclosed...
>
> In the classrooms, there are rows of broken and worn-out desks, the wrong size for different ages, some collapsed and useless, piled in a corner; windows are often patched with paper for want of glass, the floor cracked or simply dirt-covered. Most classrooms are cold, dark, small and barely isolated from outside noise. Blackboards are not always painted black or dark green for better visibility and are often worn out, grey or pale green smudged with poor quality chalkdust. Few of the schools visited have a room where children can consult books outside class hours or when they need information for an assignment. In some schools, the principals had students leafing through dictionaries in their offices.
>
> Teachers' rooms also lack conditions for rest periods or team work. They are small and frequently lack enough seats, coatracks or hangers, or shelf space for books and materials. Teachers go in and out between classes, but it is clearly not easy to teach and learn in these conditions.
>
> Some children erase the first pages in their notebooks in order to write on them again. Some children go around the class trying urgently to borrow a pencil to do an assignment.
>
> The teachers treat such precariousness with flexibility, giving out a sheet of paper here and there; asking quietly, Who has a pencil they can loan to so-and-so?; pulling a few coloured pencils or a couple of erasers from their own pockets; saying things like, Bring me your pencil, it's so small I'd better sharpen it for you, or Colour it with the colour you have; if someone can loan you another colour, that's better, but if not, it doesn't matter. What matters is that you colour it well.
>
> Recess, however, is the time when these children are like all children: they run, play ball and laugh on the playground. They show how important the

20. Cardemil, C. *El Proceso Pedagógico en el Aula.* Evaluación del Programa de Mejoramiento de la Calidad de las Escuelas en Sectrores Pobres en Chile. Santiago, CIDE, 1991.

> school environment is for their development as children. Fortunately, it's springtime, and the sunshine makes everything else less stark and shabby.
>
> The teachers seem tired, even at the beginning of the school day. Many of them come from other schools where they work in the morning. They are modestly dressed and often look as poor as their pupils. The men teachers, only one or two in the lowest Grades, wear shabby suits or well-worn sports clothes. Some of the women teachers wear smocks over their clothes, but, like the children lining up before class, their clothes reveal them as impoverished professionals, disciplined in the rituals of the school and the recent history of silence and authoritarianism that is only just beginning to change."
> (Cardemil, pp. 24-29)[21].

This rather long description illustrates clearly and in detail the misery and need in so many schools, the real magnitude of which is not fully known or recognized, since general figures and current levels of economic development tend to distract attention from, and diminish the gravity of, the problems affecting the poorest sectors of society.

2. *Personnel*

Teachers: Teachers are certified and are graduates of either universities or professional institutes. According to the sample studied for evaluation of the programme, 59 per cent were university graduates, 22 per cent normal school graduates[22], and 15 per cent had equivalent certification (3.2 per cent did not respond). They lack basic skills for creating and managing a high quality learning environment. Teacher training is inadequate, with heavy emphasis on didactic theory, insufficient practical training, a low level of basic knowledge required in the different subject matters, no specific training for working in poor communities, and a vacuum in acquisition of classroom management skills.

There are more women teachers than men. Within the schools included in the programme, at least, teacher rotation is not the most serious problem; 33 per cent of the teachers had been in the same school for 3 to 7 years, and 21 per cent for 8 to 12 years. The most serious problem appears to be the rate of teacher absenteeism during the school year.

Supervisors: The supervisors have an average of 10 to 15 years experience, with a more or less equal number of women and men in this position (48.9 and 50.1 per cent, respectively)[23] .

21. Cardemil, C. El Proceso Pedagógico. Evaluación del Programa de Mejoramiento de la Calidad de las Escuelas en Sectores Pobres en Chile. Santiago, CIDE, 1991.

22. The normal schools were closed at the beginning of the dictatorship, eliminating high-quality teacher training institutions.

23. The information on supervisors is based on a sample of 276 supervisors surveyed for the evaluation of the 900 schools programme. See Mayorga, L. Percepción de Supervisores, Directores y Profesores. Evaluación del Programa de Mejoramiento de la Calidad de las Escuels en Sectores Pobres en Chile. Vol. 4. Santiago, CIDE, 1992.

In theory, the supervisors' role is to provide technical and pedagogical support to teachers and principals, but in practice, their primary activities center on inspection.

Principals: In Chile, the school principal also plays a decisive role in defining the educational programme and the school climate. In practice, however, the principals' time is taken up with administrative detail, and the opportunity for educational leadership is wasted.

3. The teaching-learning process

A number of studies have documented the fact that generalized deficiencies in the quality of education are seriously compounded in schools located in improvished areas.[24]

The following is a brief review of the most serious problems affecting the quality of education for the poor:

- inefficient use of time, it was observed that in a 90-minute period, only 40 minutes were effectively used;
- lack of adequate instructional materials;
- disqualification of poor students and their daily experiences;
- low expectations for student success on the part of teachers;
- lack of adequacy between content material and students' cultural reality;
- teacher's lack of skills to teach in the first years of primary school;
- didactic teaching styles with little interaction between teachers and students;
- teacher's lack of knowledge about the concrete reality experienced by their students;
- the isolation of pedagogical work, without the possibility of team work, exchange of ideas and experiences or criticism;
- the inability of teachers to observe and analyze their own performance.

[24] ... above under 'general context'.

Chapter III

Origin, characteristics and development of the programme

A. Origin

The idea for the 900 Schools Programme originated towards the end of 1989, during the pre-election period when the *Concertación de Partidos por la Democracia* (Concertation of Pro-Democracy Parties) formed working groups to develop future policies for the different government sectors. But the gestation period for the programme was much longer, almost the entire 16 years of dictatorship, during which time private educational research and development agencies conducted pilot projects in non-formal education and educational research, without being able to influence national educational policy. Therefore, although start-up of the programme was quite swift (the idea was put forward in October 1989 and implementation began in March 1990), the elements that went into its elaboration are the fruit of trials, failures, achievements and efforts sustained throughout the previous 16 years.

In retrospect, several forces combined to generate the programme:

- a group of motivated, professionally qualified people dedicated to the programme;
- accumulation of knowledge to support decision-making;
- a period of political transition that provided the space for putting new educational topics on the decision-makers' and politicians' agendas, which included specific demands for improving the quality of education;
- the courage to be imperfect, considering that the programme was launched with a clear overall orientation but without elaboration of the details;
- finally, international collaboration and financial support for the start-up and installation of the programme.

B. Characteristics of the programme

1. Guiding principles

Student failure in poor communities has multiple causes, in which the school bears some responsibility. The formulation of the programme began with a recognition that deficiencies in the quality of education in impoverished areas has multiple causes and proposes a change in perspective in terms of the responsibility for student failure. Causes include inadequate teacher training, the inability of supervisors to fulfill their pedagogical

role, in appropriate curriculum for the cultural reality of poor children and a lack of even minimal facilities in the classroom and the school. Responsibility for student failure is placed on the school, the teacher, and the principal, while removing the blame from the family, the child, malnutrition and poverty.

Positive discrimination is taken as a guiding principle, given that in unequal social and economic conditions, such as those observed in these schools, the principle of equal opportunity tends to perpetuate these inequalities. From their very first day of school, poor children are less prepared for the school tasks than middle- and upper-class children[25].

Therefore, it was proposed to replace the principle of equal opportunity with the principle of *equal outcomes*, according to which, after a reasonable period of time, all children would be able to obtain similar outcomes in developing the basic skills for access to knowledge and participation. To reach this goal, positive discrimination strategies are required, which implies providing more and better material and human resources for the education of those who have received less. A recent UNESCO/OREALC document indicates the following:

> "One of the planners' priorities has been the gradual substitution of the principle of equal educational opportunities by the principle of equal outcomes. Likewise, the channeling of resources toward compensatory programmes has been replaced by channeling of resources toward the school and especially toward the educational processes. Since educational resources in most countries are not only scarce but threaten to decrease, and the problems to be solved are very large, the concept of focalization is fundamental... This involves identifying the population areas most vulnerable in terms of high risk of student failure, in order to channel resources in that direction, selectively and discriminately in favour of the groups with the greatest need." (p. 33)[26].

In the programme, this has meant selecting as beneficiaries the poorest schools with the lowest achievement in the whole country; contracting the best professionals in the country for the central team, which is made up of the national co-ordinators and teams of specialists who prepare the manuals and train the supervisors, teachers and monitors; delivering equipment; and increasing class hours for third and fourth grade children whose achievement has been low.

Equity is the guiding principle of national educational policy, and the programme is one of the strategies utilized to move toward the goal of "integrating more and more Chileans in the development effort"[27].

25. We do not mean by this that they are unable to acquire the necessary skills, nor that they suffer from problems in their intellectual development. The fact is that the conditions of their daily lives lead them to develop other skills, which are usually not taken into consideration at school, and furthermore do not prepare the children for learning tasks.

26. UNESCO/OREALC. *Medición de la calidad de la educación: ¿Por qué, cómo y para qué?* Vol. 1. Santiago: UNESCO/OREALC. Replad. 1991.

27. President Patricio Aylwin Azocar, *Presidential Message*, 21 May, 1990.

Professionalization of teachers is aimed at "aiding teachers in curricular decision-making, based on their own criteria; proposing transformations in their teaching practice rather than trying to impose prescribed changes"[28].

Cultural articulation between the school and the community seeks to give recognition to the children's experiences at home and in the community by integrating these into the content and learning activities in school, and by building new learning on them.

Finally, the focus on the first four Grades of primary school, the emphasis on language arts and mathematics, and the introduction of young people from the community as learning monitors were chosen on the basis of the following:

- Student achievement is especially low in poor schools, beginning in grade 1 and increasing as pupils move ahead in school, since the deficiencies are cumulative.

- The schools are not prepared to receive and adequately teach children from poverty areas.

- Changes can be introduced in the school and the classroom to improve the students' achievement levels; the school has a share in the responsibility for this.

- Teachers play a crucial role in this process in their way of thinking and in the way they conceive their job and their students. Low expectations of student success, delegating responsibility for student failure to the family or the children, not assuming their own responsibility, parallel teaching styles in which there is no interaction with the students, negative prejudices about the students and their families – all these factors contribute to produce low quality education for the poor.

- The introduction of monitors from the community in the teaching-learning process and popular education approaches may provide the conditions for breaking the school's isolation and for forming more flexible and more participatory approaches to education.

- Run-down buildings and poor facilities affect the school environment and the quality of education.

- Children need an enriching environment of written language beginning in grade 1, since they have had little interaction with letters at home and have been unable to discover the significance of written words as a means of communication and access to a broader world.

- Prejudices exist, on the part of teachers as well as students, that block the possibility for learning mathematics. Teaching of mathematics is frequently mechanical and divorced from real life experience.

28. Gálvez, G. ; Navarro, S. ; Riveros, M. y Zanocco, P. *Orientación del trabajo en los talleres de profesores en matemática.* Santiago, Ministry of Education. September, 1992.

- Traditional approaches to teacher training through short, theoretical courses have not made an impact on the quality of education.

Change or improvement?

The overall aim of the programme is *improvement*. This implies working within the framework and rules of the education system in an attempt to maximize the educational potential of all the people involved.

In practice, this means using human resources and available material to the utmost, such as for example, supervisors, teachers and pupils. The programme's principal characteristic was *realism in action and idealism of aims*.

The learning workshops run by community monitors fall outside the traditional framework of the school but their general objective is in keeping with the school's objectives, i.e., to improve the learning and self-esteem of the pupils. As a matter of fact, since it is different, it was this component which initially defined the visible side of the programme and was the target of political attack. However, this changed as time went by, being accepted and valued by supervisors, principals, teachers and the community.

In short, the programme is characterized by its emphasis on improvement of education, by making use of existing spaces, maximizing the potential of existing resources, realism in action and idealism in aims.

2. *Aims and objectives*

In summary, the programme aims to improve the quality and equity of education in the poorest schools with the lowest achievement in the country, beginning by working with the four first Grades of primary education.

The specific objectives are the following:

- To improve the levels of performance in language and mathematics in the four first Grades.
- To improve the quality of the teaching-learning process in the classroom.
- To train supervisors so that they can adopt their role as pedagogical guides in the school.
- To change the negative attitudes of the teachers towards the pupils from poor areas.
- To promote the teachers' awareness of the responsibility they have for the failure and success of their students.
- To break the isolation of the teachers' work and promote teamwork.

- To create a more productive interaction between the school's culture and that of the family and community.

3. *Content*

(a) Language and mathematics

The teacher workshops placed more emphasis on the training of language and mathematics. Language training emphasized valuing the language and the experience of the students, through the teachers' attitudes and behaviour relating to listening and respecting the childrens' words and conversation[29].

It was proposed to promote the development of pupils' reading skills and the enrichment of the written language by creating an educated environment in the classroom and classroom libraries within reach of the children.

Knowledge of the structure and function of the language by the children is another objective, which is developed through the practice of oral reading by the teacher as a means of communication, through the practice of silent reading and through writing as a means of communication and personal and collective creation. (A list of some of the concrete actions proposed to implement this approach in the classroom is shown in *Appendix 1.*)

In mathematics the starting point was to recognize the resistance both by the teachers as well as the children regarding the subject.

> "It is known by many teachers and students that mathematics is characterized by its accuracy, by its formal and abstract nature, by its axiomatic orientation and even for some by its rationality that leaves no room for emotions. This image of the subject is clear with repeated expressions such as: one has to be very intelligent to learn mathematics, you are not going to learn mathematics, you are very slow, high marks do not exist in mathematics, the good teacher of mathematics is someone who gives more bad marks than good ones in the class."(p.2)[30].

This is why the programme favours development of an attitude of trust and well-being as a necessary condition for both teaching and learning mathematics. It expressly focuses the teacher's process on this at the same time as that of the pupils, understanding that part of the difficulties in this area arise more from the history of this teaching style and the attitudes that go with it than from real proven incapacities of the teacher and the students.

A second aspect was related to the need to revitalize teaching practices by providing teachers with concrete elements to make the formulation of mathematical concepts and

29. Condemarín, M. ; Galdámes, V. ; y Medina, A. "Propuesta de Perfeccionamiento en Lenguaje oral y Escrito". In *Revista de Educación*, No. 182, p. 38-43, Santiago, 1990.

30. Navarro, S. ; Gálvez, G. ; Riveros, M. ; y Zanocco, P. *Mejoramiento de la calidad de la educación matemática en el primer ciclo do educación general básica (Programa de las 900 escuelas).* Santiago, Ministry of Educación, Paper presented at the VII Mathematics Education Meeting, 1991.

relationships by the students easier. Thus, the teachers had to understand that the formulation of basic mathematical notions arises from activities using objects.

A third major element in the mathematics programme is the activation of mathematical knowledge through problem solving, which is conceived as a privileged activity to help students to understand the meaning of mathematical knowledge they learn at school and its relationship with what they achieve and need outside school.[31]

(b) Daily family and community life

This content is explicitly treated in the learning workshops, covering three main thematic units:

- Myself and my family: the knowledge that each boy and girl has about himself/herself, as well as that of his/her family.
- Myself and where I live: The participants take a profound look at their community by undertaking a task related to looking after their environment, making contact with the community authorities and receiving visits from their representatives.
- Myself and my country: The group takes an imaginary study trip around the country and the region by producing together a map of Chile and by organizing a fair in which typical products of each region in the country will be sold.

4. The components

The components of the programme can be grouped around four major areas of direct action:

(i) Training of educational agents
(ii) Production of materials
(iii) Monitoring
(iv) Communications

(i) Training of educational agents

National workshops for supervisors: These workshops are aimed at training the supervisors to conduct in-service training workshops for teachers and to train monitors for the learning workshops. They are scheduled three times a year, bringing together all of the programme's supervisors for one week with room and board provided.

The in-service approach is generally professional, based on personal experience, active and participatory. The idea is to integrate knowledge and experiences from four sources: language and mathematics' specialists, supervisors, teachers and students.

31. For more details about the Mathematics proposal, see Navarro, S. et al. op. cit. ; Gálvez, G. ; Riveros, S. ; Navarro, S. ; Zanocco, P. *Orientación del trabajo en los Talleres de Professores en Matemática.* Santiago, Ministry of Education, 1992.

The ethnographic study conducted when the supervisors entered the programme showed how important these events were for them in encouraging their sense of belonging to the programme and enhancing their knowledge of the national educational reality:

> "From the first day, the supervisors seemed to like and enjoy these meetings. There was a relaxed environment. In fact, while waiting for the first workshop to begin, the supervisors sang and talked in groups in a happy atmosphere. A supervisor even sang in the meeting room and everyone stood up to applaud him, and he was asked to sing again. In the following days, the festive atmosphere was repeated, especially in the evenings when different recreational activities were organized, which on some occasions, despite fatigue, went on very late.
>
> The opportunity to meet, share and get to know each other was deeply valued beyond the objective of the meeting. These meetings are very useful for working together and getting to know supervisors from different places, reported one supervisor from the Seventh Region in an informal conversation". (p.13)[32].

These workshops have improved with experience. One of the most significant changes introduced has been the explanation of the pedagogical meaning of the different proposals worked on in the training workshops, given that this provides the bases for decision-making by supervisors and teachers when the training is implemented.

In-service workshops for teachers: These are undertaken by each supervisor with the teachers of the schools they supervise. The training is in groups, uninterrupted, throughout the year and begin with a weekly meeting and continue later with bi-weekly sessions. They are carried out in the same work place and try to combine reflection and analysis of the teaching practice with the introduction of new methodologies. This method[33] was defined on the basis of findings by educational research which showed a very weak association between teacher training and quality improvement in education Besides working on the subjects they generally provide opportunities for meeting and exchange, a space teachers can take advantage of to relieve the stress caused by confronting their students' difficulties.

32. Edwards, V., Assael, J. and Egaña, L. *Capacitación de supervisores y perfeccionamiento docente.* Santiago: PIIE, 1991.

33. Barriga, H.C.; Vidalón G. *Influencia del docente en el rendimiento del alumno.* Lima: INIDE, 1978.
Echart, M. *Los determinantes de la educación en la Argentina.* Buenos Aires: ECIEL, 1976.
Hawes, B.; Donoso, S. *Necesidades de perfeccionamiento y reciclaje de los profesores básicos de la provincia de Linares.* Talca: Universsidad de Talca, 1983.
Mercado, R. *Formacion de maestros y práctica docente.* México: DIE, 1988.
Nogales, I. *Los maestros y las perspectivas de innovación pedagógica.* La Paz: CEBIAE, 1988.
Parra, R. *Los maestros colombianos.* Plaza y Janes, 1986.
Petty, M. *Perfeccionamiento docente y educación rural en la provincia de Córdoba.* Córdoba: Facultad de Filosofía y Educación, Universidad Católica, 1982.
Schiefelbein, E.; Simmons, J. *Los determinantes del rendimiento escolar: examen de la investigación en los paises en desarrollo.* Ottawa, CIID, 1978.
Vera, R. *El debate subyacente de las políticas de perfeccionamiento docente.* Santiago, 1988.

Another observation relates to the fact that during the workshop the supervisors transmitted the messages contained in the programme's pedagogical plan, thereby demonstrating their identification with the programme. In the beginning, however, many supervisors did not pay sufficient attention to the teacher's activities, thus losing important learning opportunities. Another unfavourable element was the fast pace at which the sessions were conducted, pressuring supervisors to get through the material to meet the schedule without taking time to analyze each activity in detail.

Training of monitors

The learning workshops are included in the community educational programmes, and their pedagogical purpose is understood within this perspective. As a general framework, community education proposes social pedagogy, whose theoretical source is found in Dewey and Freire, among others. It is characterized by using democratic procedures to resolve social or interpersonal problems. Learning is seen as a process based on people's experience and lives, so that intellectual development and social process are inseparable... If social pedagogy is viewed in this way, the hypothesis that the greater the responsibility assumed by the child to think about his experience and to develop his own view of the world, beliefs and values, the greater the possibility of generating a network of information, concepts and values that are his or her own. (p. 15)[34]. The pedagogical approach both for the training of monitors as well as the educational work that they carry out is based on three main principles, to:

- Learn by doing.
- Learn from the environment and from own experience.
- Learn in a group.

The monitors are trained by the supervisors to carry out learning workshops which are managed by a group of male and female monitors. The educational project that they carry out with third and fourth grade students has five subjects that are organized into 31 sessions. Its objective is to raise the self-esteem of the children, develop oral and written language, basic skills basic skills to learn mathematics and to develop interest in learning[35]. The way in which a session is suggested is shown in the following illustration.

(ii) Production of educational materials

The team of specialists produced several textbooks and manuals to be used for training sessions, and childrens' exercise books for the learning workshops, as well as preparing a group of didactical games for language and mathematics. The list of updated texts and materials is shown in *Appendix 2*. They are constantly being revised in the light of information provided by supervisors and teachers.

34. Vaccaro, L. *Reconstrucción de la Propuesta Pedagógica de los Talleres de Aprendizaje. Documento de apoyo sobre talleres de aprendizaje para ser trabajado en el perfeccionamiento docente.* Santiago, PIIE, 1991.

35. Vaccaro, L.; Ballasty, B.; Fabiane, F.; Martinez, H.; Rozas, M.; Solar, R.; Larrain, C.; Richards, C.; Rivera, M.A. *Talleres de Apredizaje, el Manual del Monitor. Descubramos nuestra forma de ser y nuestra manera de vivir.* Santiago, Ministry of Education, PIIE, 1992.

(iii) Monitoring

This component of the programme came about through an external evaluation and through periodic visits from professionals of the central team to the Regional Departments and to the schools in the different regions.

An external evaluation was also carried out which was the responsibility of the Educational Research and Development Centre. Four complementary lines of work were envisaged.

- Measurement of improvement in the levels of performance in language and mathematics of first, second and fourth Grades of primary education (10 per cent of the students who participate in the programme).

- Analysis of the communication chain which teacher improvement is based on, by means of an ethnographic study of three supervisors in the programme.

- Analysis of changes in behaviour of the teacher, by means of naturalistic observations in the classroom (30 teachers, with two observations per teacher in each year, 1990 and 1991).

- Analysis of how the programme was received by supervisors, principals and teachers by means of interviews and questionnaires (to all the supervisors, to 10 per cent of the teachers and principals in the same schools selected to evaluate performance improvement)[36].

The constant dialogue between the evaluating team and the central team was a key element in this evaluation, providing timely information about trends observed in the evaluation and negotiating their specific points.

In addition, internal evaluations were conducted . On the one hand, the Supervisors of each region evaluate their work in the different provinces, together with the Heads of the Provisional Departments and the National Co-ordinator. On the other hand, each school conducts a participative evaluation at the end of each year. Finally, the central team at the Ministry, together with the external evaluation team, evaluates the year and prepares the programming for the coming year.

(iv) Communication

The *Learning together* bulletin, which is designed for schools in the programme, supervisors and monitors, is published. This is a publication that on the one hand gathers contributions from teachers and students and on the other contains technical notes. This instrument seeks to reinforce the identity of the project, to create links between schools and to provide elements of training and improvement.

36. See Cardémil, C. *El Proceso Pedagógico en el Aula.* Evaluación del Program de Mejoramiento de la Calidad de las Escuelas en Sectores Pobres en Chile. Vol. III. Santiago: CIDE, 1991.
Edwards, V. *Capacitación de Supervisores y Perfeccionamiento Docente.* Vol. 2 Santiago: CIDE, 1991.
Mayorga, L. *Percepción de Supervisores, Directores y Professores.* Santiago, CIDE, 1991.

5. *Implementation of innovation*

(a) Available resources and political support

There was external help from the Swedish and Danish Governments which amounted to US$5 million for the first two years. In the following years the amount dropped since no money was invested in improving the infrastructure which will be absorbed by the World Bank Project. In addition, a team was formed, the national co-ordination and specialist team responsible for production, design and training.

One of the objectives of the programme was to work with structures and technical equipment existing in the system, under the assumption that there are spaces to create and improve, that the problem is not so much capacity but perception of limits and possibilities. The participation of the supervisors is a key element of this approach as is the professionalization of teachers at school level.

The inauguration of the programme was carried out two days after the democratic government entered office. The affective commitment and the hope of a better future contributed to launch the programme successfully[37].

At the same time, since the programme was one of the most visible actions of the new democratic regime, it became the target of attacks from the political opposition. The monitor workshop was especially attacked, in relating it with the educational reform proposed during the regime of the Unidad Popular (Allende's Government). It was further argued that the Ministry of Education was using the programme to politically indoctrinate the young people from the communities. On August 31, 1991 one of the most widely read newspapers in the country appeared with the following headline question in the section 'Politics face to face' 'Marxist penetration in education?' The deputy of the UDI (Independent Democratic Union, a right-wing party), Jorge Ulloa wrote: "The reply to the question like the one that appears in this column is affirmative. The above is the result of various signals coming from the Ministry itself and the party airs that sustain models clearly identified with marxist socialism ..... On the other hand, the unclear plan for the preparation of monitors that the Ministry of Education is implementing for an aid plan for 900 schools in the country makes us doubt about its objective, e.g., can it be possible to instruct monitors in four days who will work in the schools selecting people that do not know anything about education, apart from being prepared by a Non-governmental organization like *El Canelo de Nos* with a clear left-wing trend"[38].

These accusations diminished with time and monitors began to be recognized as an interesting strategy for obtaining greater co-operation between the school and the community.

37. The Minister of Education arrived in his official car on a narrow street in a poor neighbourhood in the capital city. Women, children and young people came out to see him. "Nobody important has ever come to see us before," they said. "It looks as if this President really is concerned about the poor."

38. *La Tercera*, August 31, 1990.

Supervisors are the key people for the implementation of the programme, and initially doubts arose with regard to the feasibility of the proposal since some supervisors were supporters of Pinochet's regime and had been hired during the military government. This caused resistance from both sides. The supporters of the 'Concertación' did not want to form teams with the supporters of the military regime, and those supervisors who supported the military regime did not want to co-operate in a programme which gave 'marks' to the government of President Aylwin. These tensions slowly disappeared, thanks in part to the fact that the programme strongly emphasized the professionalization of supervisors and teachers and defined improvement in education as its goal, thus stating a common objective that subordinated the political differences.

(b) Utilization of existing structures

The objective of the programme was to use existing structures and spaces: decentralization, the supervisory system, the schools.

At central level: The programme directly depends on the Undersecretary of Education, who has given it administrative agility, but it is connected to the rest of the structure through a Council in which the different regular organizations of the Ministry participate: Department of General Education, Department of Planning and Budget, Improvement and General Administration Centre.

At regional and provincial levels: Those responsible for the programme are the heads of the following departments: the Ministerial Regional Secretaries and the Heads of the Provincial Departments of Education. Each of these authorities has named a programme co-ordinator for its level, who acts under its delegation at regional and/or provincial level. Most of these regional and provincial co-ordinators were employees who worked in the Ministry of Education before implementation of the programme. *At local level*: the supervisors of the Ministry of Education are the ones that carry out the programme in schools[39].

(c) Sub-contracting specific tasks

Some specific technical tasks were sub-contracted to specialized private institutions, such as the external evaluation and the design of the learning workshop, as well as support for the training of monitors which, although it was carried out by the supervisors in the provinces, had support teams from the Interdisciplinary Educational Research Programme. The study of physical plant repairs was sub-contracted to an engineering company (Cárcamo, Arriagada and Associates) and was carried out by the municipalities in charge of each school.

(d) Co-ordination with other government agencies

The *Junta Nacional de Auxilio Escolar y Becas* (National Board of School Assistance and Scholarships) gave daily meals to the students of the schools which participated in the programme, thus helping students in a more comprehensive way.

39. Cardemil, C.; Latorre, M. *El Programa de las 900 Escuelas: Ejes de la Gestión y evaluación y evaluación de su impacto*. Santiago: UNESCO/OREALC, 1992.

The 900 Schools Programme and the Quality of Education Improvement Programme (MECE) of the Ministry of Education. This relationship is new and its details are being worked out. On the one hand the programme's physical plant improvement component will be assumed by MECE; on the other, it is feasible that a percentage of the schools in the programme will participate in Improvement Projects. Each school will prepare a specific project to improve the quality of education, which will compete with other projects to receive financing and support from the MECE. Those schools whose bids win would not continue in the programme, but would work on their own proposals.

Informal Co-ordination with universities: The universities in different regions have co-operated with the programme through research or training.

(e) Problems

Supervisors' time: there is no explicit norm that assigns supervisors exclusively to those schools which are in the programme. This has resulted in a work overload, since 83.0 per cent of the supervisors are responsible for other schools that are not included in the programme. As can be seen in *Table 2*, there is a high percentage of supervisors that have other schools under their responsibility, with those who have between 6 and 10 schools reaching 26.5 per cent. Although quantities tend to decrease in the following sections it is noteworthy that 41.6 of the supervisors have more than 10 schools under their responsibility, apart from those of the programme. This is a factor that should be taken into consideration when analyzing the real possibilities of carrying out suitable technical-pedagogical advisory work together with the specific realities of each school in the programme.

Table 2. Number of supplementary 900 Schools Programme given advice by the supervisor

Quantity	Number	%
Up to 5 schools	43	15.6
Between:		
6-10	73	26.5
11-15	48	17.5
16-20	34	12.3
21-25	12	4.3
26-30	5	1.8
31-35	7	2.5
More than 36	9	3.2
No reply	45	16.3
Total	276	100.0

Source: Mayorga, L., Perception of Supervisors, Principals and Teachers. Evaluation of the Quality Improvement Programme of Schools in Poverty Areas of Chile.

The number of teachers and monitors that the supervisors state they supervise is shown

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In the case of the number of teachers to whom supervisors give advice, the greatest percentages are found in 'more than 21 teachers' reaching 51.5 per cent. A large percentage is represented by the 'more than 40 teachers' category with 24.6 per cent. In the case of the monitors, data reveals that 85.1 per cent of the supervisors advise up to 10 monitors.

This data illustrates the supervisors' work overload, which frequently jeopardizes the possibility of good in-depth pedagogical work with follow-up. This is one of the reasons why in some provinces in-service training is not conducted experientially, but in an explanatory manner, thereby losing one of the basic components of professional teacher training.

Table 3. Number of teachers and monitors given advice by supervisors

Quantity	Teachers		Monitors	
	Number	%	Number	%
Up to 10	6	2.2	235	85.1
Between:				
11-20	54	19.5	36	13.0
21-30	75	27.2	-	-
31-40	67	24.3	1	0.4
41-50	32	11.6	1	0.4
51-60	17	6.2	2	0.7
61 and over	19	6.8	-	-
No reply	6	2.2	1	0.4
Total	276	100.0	276	100.0

Source: Mayorga, L. op. cit.

School principals: At the beginning, partly due to the shortage of time and to the need to get the programme started, principals were not explicitly included, which created certain problems, although principals were positive in accepting the programme. Among the problems that arose, it is worth mentioning that the activities of the programme were not included in the annual planning of the school activities, leading to some administrative problems such as an overload of activities for teachers, non-availability of classrooms for the in-service training workshops, difficulties in matching the schedule of the teachers who participated in the workshops with regular school activities, delays in the delivery of materials, etc.

In some cases it could be observed that principals were not fully informed about the programme's pedagogical proposal, as evidenced by their criticisms of the programme. These referred to very general guidelines or to external dimensions of the pedagogical proposal.

Nevertheless, through external evaluation, it was established that they were somewhat aware of the central pedagogical points of the proposal, but that they did not fully understand the importance of respect for the cultural reality of the students and the need to include this in school activities.

With regard to the content for in-service training in mathematics, principals understood the main point of the proposal in this area as mathematical problem-solving at the levels and capabilities of the students. No mention is made of the specific nature of this innovation which calls for posing and working out mathematical problems that include topics related to the students' cultural environment and their daily activities[40].

It is worth asking why principals do not perceive the importance of integrating the childrens' culture and daily life into school activities. Perhaps they do not understand the significance of this dimension of the proposal, and it would be important to take a closer look at this aspect.

Learning workshop monitors: At the beginning of the programme, supervisors, teachers and principals were reluctant to hire young people from the community as monitors. They argued that since there were so many unemployed teachers, it was not necessary to hire non-professional people, even though monitors only received a small scholarship, far lower than a teacher's salary. There was also professional envy from the teachers who considered that monitors should not have the responsibility in the teaching of reading and mathematics. Supervisors and monitors gave different priorities to learning workshops. The former placed more emphasis on the development of the students' self-esteem and the latter emphasized mathematics and reading.

One way of solving the problem was to grant the school the authority to select monitors, following a broad set of guidelines: young people, men and women who live in the community, who are post-secondary students with careers related to education and who are interested in working with children.

The external evaluation proved that after one year, the learning workshops were positively accepted.

> "According to the distribution of teachers' opinions, we see that 1[illegible] per cent of them think that the performance of the monitors was 'excellent', 36.1 per cent think it was 'very good', 30.4 per cent think it was 'good', and 9.9 per cent think it was 'average'." (p. 138)[41].

There was also criticism about the fact that monitors would not be sufficiently prepared, that there were discipline problems, that students do not attend the TAP's and that there was a lack of co-ordination between the third and fourth grade teachers and the monitors.

40. Mayorga, L. op. cit.

41. Mayorga, L. op. cit.

Possibly one of the major difficulties of the Learning Workshops has been that it has not been possible to integrate them into the regular school activities, although they have been accepted.

Family participation: Thus far, the programme had not developed an explicit family participation strategy. This option does not imply a lack of knowledge about the importance of co-operation between the family and the school, but rather reflects its emphasis on the professionalization of teachers. Priority was given to making teachers and principals assume their responsibility in the success and failure of students and to avoid delegating responsibilities and blaming the family . Notwithstanding the above, and due to the importance of family participation, it is considered a priority for the fourth year of the programme.

Changes in the classroom: Observations in the classrooms show that changes at classroom level, at the interaction level between teachers and students, and at teacher behaviour level, are slow. The fact that it is very difficult to implement concrete and supposedly simple changes, like creating a 'literate environment' or using didactical materials, stands out. It could be observed that the changes that jeopardize the limits of the teacher's identity are very difficult to implement. Thus, for example, it seems that asking questions after a silent reading is part of the teacher's role, therefore they have not been able to follow the recommendations of letting children read for pure enjoyment or their own interest without needing to make a further evaluation. Therefore, it is necessary to think about specific strategies to break this routine, or to redefine the identity and role of the teacher in the classroom. For this to effectively occur it may be necessary to include the principal in the programme in a more active way.

(f) Adjustments: progressive reinforcement of the different educational agents.

The programme is in its third year of operation, and different phases stand out, even though the basic components are the same. Phases are characterized by the greater or lesser emphasis placed on each component and by the achievements obtained. The emphasis for each year is as follows:

Year One : Year of the Supervisor
Year Two : Year of the School
Year Three : Year of the Classroom

Table 4 shows some of the most important milestones highlighting the work in each year, always taking into account that emphasis comes from within the field, as previously described[42].

In brief, the development of the programme during the first three years can be described as a progressive reinforcement of the different collaborative relationships in which the programme is designed. The first year emphasized the relationship between the central team and the supervisors, as well as between supervisors and teachers. The second year was focused on the principal-teacher relationship and the third year on the teacher-student

42. Interview with Cecilia Jara, currently National Programme Director, Ministry of Education, Santiago, August 1992.

relationship. For the fourth year a more collaborative and explicit study between the school and the family is foreseen. The general trend has been to progressively look for commitment to the programme from the different participants in the programme and to clearly define each one's responsibilities.

Table 4. Important goals and millstones of the programme by year

Year	Emphasis	Problems to be solved	Achievements
One	- programme Installation	- Face the fear and apathy of schools	- Encourage interest and commitment
	- Preparation of materials		
	- Definition of proposal	- Change the image of the Ministry to re-establish credibility of proposals	- Show credibility of proposal by keeping promises both in the delivery of materials as well as in training and information
	- Formation of the main team	- Overcome the resistance to the idea of discrimination	- Be able to create a positive image and identity for the schools of the programme
Two	- That the school assumes the programme as part of its educational project	- Routinization of the programme	- Design of work units to integrate school principals
	- To increase coverage	- Insufficiency of the proposal for 'high risk' schools	- More active participation of school principals
	- To adjust the programme to new contexts: multigrade classrooms		- To formulate educational projects per school projects per school
			- Intensive help to schools in very damaged sectors
Three	- To produce changes at classroom level	- Sub-utilization of educational materials - Slowness of changes in teacher-pupil interaction - Co-ordination with programme of the World Bank	- In process of analysis

The general trend has been to progressively look for commitment to the programme from the different participants in the programme and to clearly define each one's responsibilities.

In terms of finance the trend has been to move away from international support to national financing.

In terms of school autonomy, it is assumed that the programme provides the necessary resources to improve the quality of a specific school. Once the objective of improving the performance of students has been achieved (measured by SIMCE), the school 'graduates' continue working without the support of the programme. The minimum duration time of the programme within a particular school is two years. The maximum time has still not been defined.

C. Development and implementation of the collaboration

1. Different types of co-operation

The 900 Schools Programme was made possible by five types of collaboration:

(1) International collaboration.
(2) National collaboration at the government level.
(3) National collaboration between government and non-Government organizations.
(4) Provincial collaboration at the government level.
(5) Community collaboration.

International level

At this level, the most important form of collaboration is financial, which made the formulation and launching of the programme possible. Unfortunately, this collaboration was dependent on the political situation at the time rather than a regular source of support. On the other hand, the funds were readily available, enabling the programme to be initiated quickly.

National government level

This collaboration refers principally to the Education Ministry at the central and regional levels, strengthening the specific functions of each. The aim of the collaboration is administrative and technical and is expressed in the training of regional supervisors by the central team and through the administrative co-ordinators for material distribution, communications, and lunch deliveries.

National government and non-government organizations

This collaboration has primarily technical aims and consists in sub-contracting various tasks with NGOs. This has the advantage of flexibility as well as variety in supply, without having to add personnel to the Ministry staff.

Provincial level

The type of collaboration between supervisors and teachers, as well as that among teachers in different schools, is redefined from an isolated supervisory function to a pedagogic collaboration. This nexus is the main focus of the programme's actions.

Community level

Through the learning workshops, new liaisons are formed between the school and the community as monitors are included as educational agents. Among the advantages of this collaboration should be mentioned the following:

- the presence of new educational styles has a demonstration effect within the school
- teachers perceive more positively the potential capacities of members of the community;
- for the monitors, this collaboration opens new horizons with respect to their job possibilities, their vocation, and their sense of identity;
- the presence of the monitors in the school facilitates better interaction between the culture of the community and that of the school[43].

2. *Obstacles faced in generating co-operation*

Various sorts of problems have arisen, from administrative aspects to the clash between traditional forms of thinking and acting of the various individual and institutional actors involved.

Administrative problems at the regional level: The supervisors are burdened by work since they have to deal with the schools which participate in the programme, as well as non-participating schools, not to mention the time required for the training of teachers and monitors.

Teachers' working conditions: The bad working conditions in poor schools produce high levels of absenteeism among teachers, some of whom are led to seek work in other schools. Their low salaries force them to work double shifts, which wears them down and robs them of a sense of belonging and commitment to the school.

Scepticism and despair: Due to the many previous failed experiences of programme innovation and unfulfilled promises, teachers perceive innovations not as an aid but rather as a source of new demands and new promises unlikely to be kept. This generated a certain resistance and reluctance towards the programme at the beginning.

Bureaucratic logic: The logic governing operations within the educational system and the Education Ministry can be characterized as placing a high value on following rules. The cost of committing errors is much higher than the rewards for success in innovations. As a

43. The problems that arose in this collaboration were analyzed above and will therefore not be treated here.

consequence, a great deal of fear of innovations and errors is produced, as well as a strategy focused on completing assigned tasks without drawing attention to oneself.

3. *Factors facilitating co-operation*

The supervisor system: Each region has a team in charge of implementation of the programme at the school level, as well as an adequate structure for the dissemination of the innovation.

High technical level of professional teams: Professional excellence in both the central and regional teams, especially among supervisors, strengthens the programme's quality and legitimacy.

Production and distribution of educational materials: This has been one of the components most praised by supervisors, teachers, and principals alike.

Credibility and honesty: It was very important that central team members recognized mistakes when they made them and fulfilled their promises. Both factors contributed to the seriousness of the programme and to the commitment to it felt by the supervisors and the schools.

Permanent monitoring: The regular visits by the central team to the provinces enabled it to grasp the educational reality in which the programme was inserted, as well as to motivate participants.

Sensitivity to the needs of the communities, teachers, and supervisors: This was expressed in the revision of educational materials and texts in the light of information provided by teachers and supervisors, in the reworking of training content, and in the modification of the programme.

Database for decision-making: The results of the SIMCE and the research provided the basis for taking adequate, focused decisions based on the real needs of the country.

Motivated and committed professionals: The programme's central team was composed of a group of experts for whom educational improvement in poor sectors was an issue of personal concern. This meant a high level of energy and dynamism which stimulated the development of the programme.

Chapter IV

Results of the programme and lessons learned

A. Range and process of reproduction, diffusion, and sustainability

One of the most important achievements of the programme has been the utilization of existing structures within the educational system to improve the quality of the education provided to pupils from the poorest sectors and to raise their performance levels. Teachers, principals, and supervisors have reoriented their work from a bureaucratic to a more pedagogical perspective. The programme has offered the necessary opportunities for profesionalization so that this could occur and so that such personnel could assume their 'desired role'[44]. From this perspective, the strength of the programme lies in how it has taken advantage of existing structures and spaces, providing the material and professional resources needed to carry out previously unattained goals.

The programme is an innovation that involves a large number of teachers, supervisors, and pupils: approximately 400 supervisors, 1,200 schools, 7,000 teachers, and 200,000 pupils. It is not a pilot programme which must still demonstrate its effectiveness in the system, but rather a programme inserted into the system. From its beginning three years ago, the programme has been financed by the Swedish and Danish Governments. This year the costs of the programme were included in the national education budget, which will be negotiated for the year 1993. The approximate cost of the programme (without infrastructural improvements) is in the order of US$2,300 per school per year, or US$12 per pupil per year, for Grades 1 to 4.

The 900 Schools Programme could suffer some modifications as a result of the actions of the MECE project financed by a World Bank loan. In fact, some schools may terminate their participation in the programme in the event that their project presented to the PME is approved. As this relationship is just beginning, it is impossible to foresee the consequences. Nonetheless, to judge from comments made by teachers and supervisors participating in the programme, there is some uneasiness over the programme not being taken on by MECE as they would prefer.

B. Achievements

1. Increase in performance levels

After one year of operation, increases were detected in performance levels in both Spanish and mathematics. *Table 5* shows that the percentage of those grades which boosted

44. See also Edwards, V. et al, op. cit. p. 106.

their average language skills performance varied between 53 per cent in second grade to 25 per cent in fourth grade. There were also drops in averages in one group of classes, but the proportion is lower than that of the increases.

Table 5. Number of classes which showed improvements, no change, or deterioration in their average performance in language-skills evaluation after running the programme for one year

	Grade 1		Grade 2		Grade 4	
	Number	%	Number	%	Number	%
Improvements	43	45.3	51	53.1	24	25.2
Remained stable	25	26.3	34	35.4	64	67.3
Deterioration	27	28.4	11	11.5	7	7.3

Source: Latorre M., 1991, op cit.

It is not entirely clear why some schools' performance evaluations fell. One hypothesis being considered is that these schools are in a process of deterioration, located in very damaged sectors, in which the pedagogical actions undertaken did not succeed in reversing the process. It is important to note, however, that the magnitude of the drop in performance levels was inferior to the magnitude of the increase. At the same time, the magnitude of the increase is greater than the decline.

Another interesting result is that in both mathematics and in language skills, those classes which had the lowest performance levels showed the greatest improvements, which indicates success in the goal of achieving reverse discrimination.

In general, in the first year of the programme, the impact on performance levels was greatest in the first grade. This result could be attributable to various factors or to a combination of factors. In the first place, in this age-group the accumulative effects of educational quality deficiencies have not yet been produced. Secondly, the fourth grade pupils evaluated were those exposed for the shortest period to the programme (this is due to the date of evaluation). Thirdly, it is possible that the pedagogical proposal has better responded to the needs of the first and second graders than to the fourth graders. A final possible factor is that both first and second grade classrooms were equipped with libraries.

The tendencies in mathematics skills evaluation were similar to those observed in language skills.

Table 6. Number of classes which rose, remained the same, or fell in their mathematics skills performance evaluations between 1990 and 1991

	Grade 1		Grade 2		Grade 4	
	Number	%	Number	%	Number	%
Improvements	45	56.8	44	45.8	34	35.8
Remained stable	25	26.3	47	49.0	55	57.9
Deterioration	25	26.3	5	5.2	6	6.3

Source: Latorre, 1991.

2. *Pupil self-esteem*

Changes in the pupils are especially noticeable in the learning workshops in that they express themselves more easily and interact more with their peers. The external evaluation took note of the case of a boy who had never spoken in class but after participating in the learning workshop presided over the closing ceremonies of his school. As a principal said: "The learning workshops have been useful in raising the pupils' self-esteem through experiences that help them to appreciate themselves and those they live with."

3. *Improvement in physical plant – improvement in the educational environment*

The schools of programme 900 have urgent needs in terms of their physical plant, learning equipment, and supplies which are directly related to educational quality. Most teachers (67.6 per cent) participated in defining the most urgent necessities in both areas through written suggestions (48.2 per cent) or in meetings of the teacher council (9.4 per cent)[45].

One of the most visible impacts of the school infrastructure improvements was seen in the study climate and the relations between the school and the community, producing a feeling of 'pride and dignity.'

> "The classrooms are painted. There are no longer broken windows and some rooms have curtains on the windows to filter out the sun and make it easier to see the blackboard which is darker and cleaner....
>
> "The first impression of the repaired or new tables and chairs is quite different from the previous year, to the point of being like new rooms. The new furniture is right for the size of the pupils, and the bright colours contribute to the lighting of the space....

45. Mayorga, L. op. cit.

> "Clothing for both boys and girls has changed this year too. The girls have ribbons for their hair or white barrettes which are the fashion which make them look better. Both boys and girls are cleaner and better groomed. Although their shoes tend to be old, they are more often shined, and the pupils come to class with clean faces....
>
> "In a school still suffering from low prestige among the poorest families, the fact of seeing an improved infrastructure has created interest among the families to begin actions for the construction of the school and not accept whatever child comes along" (p. 30-32)[46].

The improvements of the schools' physical plant created a new sense of 'entitlement to quality' at the community level, creating new standards of quality for social services and generating a new type of demand.

4. Importance of educational materials

The supply of educational materials, according to the promises made and within the stated timetable, was highly appreciated and received with surprise. According to the teachers, the didactic material that is used most often in their classes are the student textbooks (83.2 per cent). In less regular use are the classroom libraries ('almost always', 49.2 per cent, 'always', 40.3 per cent), the learning games ('almost always', 44.0 per cent, 'always', 39.8 per cent), tape recorders ('sometimes', 33.0 per cent, 'almost always', 31.4 per cent). Mimeographs and dittos were used less systematically and received a high percentage of abstentions in the question on this item (18.8 per cent).[47]

Classroom observations found, however, that the learning games were not integrated in the educational process, but rather employed more often as diversions and breaks after a learning session.

5. Slowness of change at the classroom level

The changes in the classrooms in the interaction between teachers and pupils have been slow. What stands out is a more positive atmosphere, a greater amount of time on task and more positive perceptions of the pupils possibilities of success. More consideration is given to the pupils' experiences in the learning of academic material, but this aspect is seen less often.

At the same time, it was seen that changing the teachers' discourse with respect to their responsibility over the scholastic success or failure of their pupils is difficult. They tend to oscillate between placing the blame on the family and feeling compassion for the children.

46. Cardemil, C. op. cit.

47. See Mayorga, L. op. cit.

6. Changes in activities of agents

Teachers: more teamwork is observed while at the same time professionalization is greater. This has caused some teachers to find work in more prestigious schools and leave the programme schools, which demonstrates the need for specific incentive policies to retain programme teachers.

Principals: principals are seen more in the classrooms and take on a more pedagogical, less administrative role.

Supervisors: From inspector to pedagogical consultant. In the evaluation, 97 percent of the supervisors affirmed that the programme had enriched their work as supervisors by giving them more security and enriching them personally, as well as giving them pedagogical tools with which to work with teachers as a group[48]. As one supervisor explained in an interview:

> "I believe that the Programme 900 has systematized the consultant role of the supervisor...this role is explicit in one of the system's objectives...the system's objectives are to supervise: they separate supervision from consulting. To supervise is to pay attention, you might say, to the needs of the schools. That's how it's set up. Now for me, the role of the supervisor is to advise, especially the educational supervisor...this is the general guidance, and from there you can reach other goals or tasks... Programme 900 has provided this, enabling a systematization which forces the supervisor to take on an advisory role, to facilitate the transmission of what he has to transmit... but this, supporting it more firmly. What I mean is, we, some of us supervisors, could have done this before, and in fact we did, but now we have more support."
> (Edwards, et al.)

Monitors: In addition to the supervisors, monitors also showed the most substantial changes as a result of the programme, not just in their work but also in their personal goals. At the present time, various monitors have begun pedagogical degree programmes[49].

NGOs: The participation of NGO professionals in the programme has affected their perspectives and the style of work. It has facilitated more intimate knowledge of the system's operations, while at the same time new questions have arisen for future research.

7. Possibilities and modes of dissemination and reproduction of the programme

As the programme has a demonstrable effect, one of the most fertile methods of disseminating and reproducing it is on-site visits and interviews with teachers, supervisors, and other participants.

48. Mayorga, L. op. cit.

49. No exact figures available at this time.

The materials and the pedagogical proposal, as well as the supervisor training modules, can be used as models for adaptation in other situations.

The learning workshops can be used as a model, but the materials would have to be adapted to different cultural realities.

C. Lessons learned

- There are spaces within the system for improvements in educational quality.
- The school can take responsibility for improvements in the performance levels of its pupils.
- Bureaucratization and routinization of pedagogical work are factors which impede high-quality education.

1. Contexts and possibilities of change

The importance of credibility: A general sensation of despair and apathy was apparent when the programme was initiated. The past had been characterized by unfulfilled promises, producing a general lack of motivation. One interesting example was the request to teachers and principals to suggest improvements needed in physical plants. Many of them did not respond and were surprised to find that those schools which did respond obtained the desired improvements. For this reason, 'carrying out promises' was from the beginning a key factor in the commitment which was achieved from supervisors, teachers, and principals.

The importance of international collaboration for the development and installation of the programme: Without outside assistance, the programme would not have been possible. Now that its efficacy has been proved, there are solid arguments for negotiating the continuing financing of the programme through the national education budget.

The importance of collaboration between NGOs and the Education Ministry, different styles of perception and procedure: The experience of the programme showed that a different perspective towards the educational system, a certain ignorance of the traditional limitations, stimulates creativity and the exploration of new possibilities. This was what happened due to the presence of professionals from NGOs on the central team. Educational NGOs typically reward creativity and novelty and provide ample margins for committing mistakes. By contrast, work inside the Ministry more often is rewarded on the basis of fulfillment of norms and provides very narrow margins for error, which have a high cost. This explains in part the great inertia existent in the educational system. On the other hand, Ministry personnel have the experience of managing programmes on a large scale, they know education at the national level, and they maintain relations with other ministries. In the programme, a successful combination between both perspectives and abilities was achieved.

Participation of educational monitors from the community, positive discrimination, cultural articulation, and revision of prejudices: The participation of community monitors in the learning workshops has been an effective procedure for achieving a decrease of scholastic desertion in the school. It has contributed to a positive and realistic perception of

the community by teachers and to an increased presence of the community and family culture inside the schools. For the monitors it has provided a space and an activity which gives meaning and purpose to their lives.

The importance of educational research in making educational problems visible and in defining priorities: The programme was formulated on the basis of results of research done in the country and the region. This allowed a clear definition of the focus of the programme, as well as its priorities. Part of the success of the programme can be attributed to its attention to existing problems.

The importance of educational resources: This component of the programme is one of the most praised, both by supervisors and teachers. Some 50 per cent of the teachers mentioned the availability of new materials for the teaching process as the most important aspect of the training they received, while 18 per cent gave top priority to the fact that teachers were interested in improving their skills, 10 per cent placed primary importance on the new work relationship with the supervisors and 9 per cent indicated the increased appreciation of the personal and family situations of the pupils.

2. *Different types of schools, different possibilities of impact*

It was possible to detect, through the implementation of the programme across the entire country, that its success depends on certain previous conditions in the community and in the school.

It was seen that, because of the needs of the pupils, schools could be classified according to the function they fulfill a:

- protective function;
- socio-emotional containment function;
- cognitive development function.

Schools with protective function: Some schools were located in communities characterized by high levels of material poverty, social disintegration, and violence. In these schools, the most important function is that of protection of the children from the negative and damaging influences of domestic or community violence. In these schools, the possibilities for establishing affective links are low: the children seem to have disconnected themselves from social networks and the negative impacts of their environment. These schools do not have the necessary conditions for launching the pedagogical actions as such, the teaching staff is affected by despair and apathy, and the minimum conditions for reaching agreements seem non-existent.

Schools with socio-emotional function: In these schools, the student body comes from homes in which the basic biological and security necessities are satisfied, but where there exists a lack in the affective realm that the school must confront either before or in conjunction with the process of systematic learning. The emphasis in these schools is placed more in creating a flexible, warm ambience which will permit the establishment of ties and self-expression on the part of the pupils. The learning workshops of the programme seem to respond very well to these necessities.

Schools with a cognitive-instructional function: To some degree, pupils in these types of schools seem to be satisfying their basic physical and affective necessities. Therefore, conditions for the initiation of a more systematic learning process do exist. The programme probably has been most effective in this type of school. This typology is obviously an oversimplification of reality, but it does provide certain orientations with respect to particular lines of action. The programme seems to deliver the necessary resources to make possible the socio-emotional and instructional-cognitive functions of a school. Still to be resolved is the design of actions to enable a school to fulfill the protective function as well[50].

50. Mayorga, L. op. cit.

Chapter V
Conclusions and recommendations

A. Essential, important and useful conditions

Of the various facilitating conditions described in Section C, we can select those which appear to be essential for the successful implementation of the intervention, those which are important, and those which are useful.

Essential conditions

- Existence of a system of supervision.
- A central team of experts, responsible for the technical and administrative aspects of the programme.
- Flexible leadership with constant monitoring sensitive to local needs.
- Permanent monitoring.
- A proven model for the incorporation of a non-formal, education component in the school, the learning workshops.
- Utilization of existing services within the Ministry, administrative and accounting support.
- Credibility of the proposal, fulfillment of promises.

Important conditions

- External evaluation of processes and results, with permanent dialogue between the external evaluation team and the central team.
- High level of professional confidence of the supervisors.
- A solid base of information on the educational system in order to take wellgrounded decisions.
- International financing for the first four years of the programme.

Useful conditions

- The tradition of state-run teaching.

B. Specific actions to promote a more effective process of educational innovation

To generate information for the taking of well-grounded decisions

- Generation of an adequate datebase on the educational system.
- Promotion of research on educational quality. Creation of a special fund for this research.
- Promotion of organizational efforts at the school level to formulate specific projects.
- Availability of funds to finance experimentation of participative educational models.

Formulation of objectives and programme planning

- The importance of goals and realistic timetables. Changes in education, especially in teaching techniques, are slow. Timetables of at least two to four years are required to achieve the proposed goals.
- Implementation of positive discrimination strategies.
- Priority placed on changes in teaching techniques.
- Creation of work teams at the school level, with flexible leadership on the part of the principal and with the educational project defined by the principal and teachers together.

Programme implementation

- Combined strategy of central efforts focused on the production of texts, the training of supervisors and the monitoring of the experience and of decentralized efforts at the regional level centered on the adaption of materials and the training of teachers, with constant evaluation. The central team provides the principal column of the programme, with ample margins for adaptation and enrichment on the part of each supervisor, teacher, or principal.
- The importance of international collaboration for research and development of innovative pilot programmes.
- The importance of monitoring and evaluation. Their effects are dynamic and introduce public responsibility.

Guidelines for planners and administrators

- Create and use databases on schools and communities.

- Work in collaboration with NGOs and universities.
- Implement and use measuring systems on scholastic performance.
- Form ad hoc teams of specialists on specific, well-defined proposals.
- Create incentive systems to avoid teacher rotation.
- Provide time during the work day for the teachers to work as a team among themselves.

Role of the administrator and planner to assure the success of the innovation

- Promote the formation of work teams at the school level, with the participation of the principal, supervisor, and technical chief.
- Sensitize the community to educational problems.
- Assure collaboration between provincial authorities and schools.
- Provide realistic timetables.

Appendices

Appendix 1
Concrete actions undertaken for language-skills training

The concrete actions proposed for teachers include:

- Their attitudes and behaviour when listening to children's stories, questions, requests, etc.
- Respect for the children's form of speech and the correction of their errors by way of demonstrating the correct forms (paraphrase).
- Conversation with the children and among them on subjects presented during classes.
- Proposal and acceptance of opportunities for communication, expression, learning, creative expression, and play.
- Recording of the pupils' communications to be read or heard later.

Immersion in written language is achieved through:

- A written language environment created by the use of signs, posters, bulletin boards, labels, advertisements, learning games, etc.
- Availability and use of the classroom library both as part of lesson plans and spontaneously, both in school and at home, and built up with the addition of diverse new texts (flyers, newspapers, magazines, etc.) and texts created by the children and the teacher themselves.

Among the activities proposed for the development of systematic activities for recognizing and learning language structures and functions are:

- Learning of the letters of the alphabet in the proper order.
- Development of phonological analysis and creating awareness of the elements that make up speech.
- Development of morphemic analysis creating awareness of the different structure and meaning of words.

Oral reading as a communicative opportunity will be promoted through:

Appendix 2
Educational materials prepared

The following didactic games were prepared:

(a) *'Tugar-Tugar'*: Used fundamentally in reading practice and comprehension. Oral and written language development. Teacher-conducted imaginative games: tongue-twisters, announcements, predicting the future, dramatizations, and rhymes. Activities which develop listening, speaking, reading, and writing skills.

(b) *Flash Cards*: Used to teach final and initial sounds by reproduction. Language, vocabulary, and readiness. Knowledge of the letters, classification into parts of speech, reading development and reinforcement.

(c) *Domino*: Used principally to identify and recognize images with words and visual and auditive discrimination. Association of phonemes with graphemes. Development of 'visual vocabulary', in oral and written language development. Some teachers note that they use it to practice basic mathematical operations, while others use it in physical education.

(d) *Word lottery*: Used for reading and writing. Grammatical functions and reinforcement of orthography. Vocabulary development. Visual and auditive word discrimination. Recreation. Dictation.

(e) *Movable letters*: Used for forming and constructing sentences, words and speeches. To form diphthongs, to recognize vowels and consonants. To complete partial words and phrases. Visual and auditive discrimination.

(f) *Key words*: Designed for word, letter, and noun recognition. To show, spell, describe, associate, and relate words. To form sentences, words, speeches, and compositions. Identification of phonemes learning of phonographemes, association of phonemes and graphemes.

(g) *Exercise sheets*: Used in reading comprehension, filling in words, sentences, speeches. Various written activities.

Didactic materials for mathematics

Flannel Board: To discriminate forms, sizes, colours, logical sequences. To classify, put in order, compare, identify, and select. To classify similar objects. Free exploration.

Odd and even cards: To develop adding, subtracting, multiplication. Relations between numbers; assembly and disassembly of numbers; previous number, next number; numerical system in general.

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